



莫大-北理工-深北莫
应用数学联合研究中心

Совместный научно-исследовательский
центр прикладной математики
МГУ – ППИ – МГУ-ППИ
MSU-BIT-SMBU Joint Research Center of
Applied Mathematics



计算数学与控制系

Факультет вычислительной математики
и кибернетики
Faculty of Computational Mathematics and
Cybernetics

应用数学讲座

Научный Семинар по Прикладной Математике
Research Seminar on Applied Mathematics

应用数学报告 (96)

报告人 / Докладчик / Speaker: Irina V. Mursenkova

题目 / Название / Title: Pulsed discharges in gas flows: a review of modern research

时间 / Время / Time: 2024.1.16, 15:00-16:00

地点 / Место / Venue: 主楼336

摘要 / Аннотация / Abstract:

The lecture discusses gas discharges of various types, which are used for plasma control of gas flows in plasma aerodynamics. A review modern study of discharges in gas flows shows the importance of describing the fundamental features of discharge development and the properties of gas-discharge low-temperature plasma. Experimental and theoretical study of electrical discharges in gas flows are mainly related to the study of the mutual influence of the electrical characteristics of the discharge and the gas-dynamic parameters of the flows, including supersonic flows. The modes of realization of discharges of various types in gas flows and their influence on gas-dynamic flows are considered. The lecture includes information about numerical methods for calculating gas flows with pulsed energy input. The prospects for the use of pulsed discharges in gas flows are analyzed.

个人简介:

Irina V. Mursenkova, an Associate Professor in the Faculty of Physics at Lomonosov Moscow State University (MSU) and at the National Research

访问学者以及需要做报告的学者请联系 张晔 教授 / Всем желающим выступить с докладами на семинаре просьба обращаться к Чжану Е ye.zhang@smbu.edu.cn

University 'Moscow Power Engineering Institute' (MPEI), focuses on several key research areas. These include the interaction of pulsed discharges with supersonic flows and shock waves, as well as the development of diagnostic methods for fast processes in gas and plasma. Her current research is concentrated on studying surface sliding discharges to control shockwaves and boundary layers. In her relevant field of study, she has published over 100 academic papers and authored 11 textbooks. She has also hosted and participated in several projects under the Russian Science Foundation (RSF) and the Russian Foundation for Basic Research (RFBR).

